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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of : Cigelske, Jr., James J.
Serial No. : 10/811,520
Filed : March 29, 2004
For : Electrical Shield for Welding Apparatus
Group Art No. : 1725
Examiner : Kevin P. Kerns

CERTIFICATION UNDER 37 CFR 1.8(a) and 1.10

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APPEAL BRIEF PURSUANT TO 37 C.F.R. §§1.191 AND 1.192

Dear Sir:

This Appeal Brief is being filed in furtherance of the Notice of Appeal filed with the Board of Patent Appeals on July 25, 2007.

1. **REAL PARTY IN INTEREST:**

The real party in interest is Illinois Tool Works Inc., the Assignee of the above-referenced application by virtue of the Assignment to Illinois Tool Works Inc., recorded on December 19, 2002, at reel 013304, frame 0946.

2. **RELATED APPEALS AND INTERFERENCES:**

Appellant is unaware of any other appeals or interferences related to this Appeal. The undersigned is Appellant's legal representative in this Appeal. Illinois Tool Works Inc., the Assignee of the above-referenced Application, as evidenced by the documents mentioned above, will be directly affected by the Board's decision in the pending appeal.

3. **STATUS OF THE CLAIMS:**

Claims 9-11 and 38-43 are currently pending, and claims 9-11 and 38-43 are currently under final rejection and, thus, are the subject of this appeal. Claims 1-8 and 12-37 have been cancelled.

4. **STATUS OF AMENDMENTS:**

All previous amendments have been entered. Appellant has submitted no additional amendments subsequent to the Final Office Action of April 25, 2007.

5. **SUMMARY OF THE CLAIMED SUBJECT MATTER:**

A shield for preventing arcing from an electrical stud of a portable welding apparatus is set forth in claim 9. The shield (50) is formed in a generally inverted U-shaped configuration adapted to at least partially surround the electrical stud (46). *Application*, p. 8, lns. 3-7. The shield (50) is constructed of a non-conductive material, with the inverted U-shaped shield including a first planar side (52) having an upper edge (54) and a second planar side (58) extending inwardly from the upper edge (54) of the first planar side (52) and having an inner edge (60), with the second planar side (58) oriented in a plane generally perpendicular to the plane of the first planar side. *Application*, p. 8, lns. 7-19. The generally inverted U-shaped shield (50) also includes a third planar side (62) extending from the inner edge (60) of the second planar side (58), the third planar side (62) oriented in a plane generally parallel to the plane of the first planar side (52) to form the inverted U-shape. *Application*, p. 8, lns. 19-24.

6. **GROUND OF REJECTION:**

In the Final Office Action of April 25, 2007, the Examiner rejected claims 9-11 and 38-43 under 35 U.S.C. §103(a) as being unpatentable over Bowsky et al. (USP 5,129,843).

7. **ARGUMENT:**

Rejection Under 35 U.S.C. §103(a) Over Bowsky et al.

Claim 9

In the Final Office Action mailed April 25, 2007, the Examiner rejected claim 9 under 35 U.S.C. §103(a) as being unpatentable over Bowsky et al. stating that “Bowsky et al discloses a plastic shield (98) for preventing arc around an electrical stud (7), made of plastic material...” *Final Office Action*, April 25, 2007, p. 2. The Examiner further stated that “Bowsky et al fail to teach the shield comprising a generally inverted U-shaped configuration” but that “Bowsky et al disclose [a] shape and number of walls [that] can be var[ied] (col. 4, lines 25).” *Id.* at 2-3. Despite this failure of Bowsky to teach a generally inverted U-shaped shield, the Examiner nonetheless concluded that “it would have been obvious to [one of] ordinary skill in the art at the time applicant’s invention was made to modify the shape of the shield to conform to the arcing directions.” *Id.* at 3. Applicant respectfully disagrees with the Examiner’s assertions and believes that the Examiner has mischaracterized the teachings of Bowsky et al. and has relied upon improper hindsight in rejecting the claims.

As set forth in MPEP 2143.03, “[t]o establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art.” As admitted by the Examiner, Bowsky et al. fails to teach a generally inverted U-shaped shield for preventing arcing from an electrical stud. *See Final Office Action*, supra at 2-3. Rather, Bowsky et al. discloses a terminal assembly 2 that includes conductor pins 7 and is sealed to a wall 4 to extend into a chamber 6. *Bowsky et al.*, Col. 3, lns. 17-21. A plastic block 8 that includes three spaced over-surface open-ended cylindrical wall shields 14 is configured to attach to the conductor pins 7. *Bowsky et al.*, Col. 4, lns. 12-24. Each cylindrical wall shield 14 extends coextensively with and corresponds to a conductor pin 7 to minimize possible through-space arcing between the pins. *Bowsky et*

al., Col. 4, lns. 12-24. Bowsky et al., however, fails to teach or suggest that wall shields 14, which are placed about conductor pins 7, have a generally inverted U-shaped configuration as called for in claim 9.

Claim 9 specifically calls for a plurality of elements configured to form an inverted U-shaped shield. That is, claim 9 calls for a first planar side having an upper edge; a second planar side having an inner edge, the second planar side being oriented generally perpendicular to the first planar side and extending inwardly from the upper edge of the first planar side; and a third planar side oriented in a plane generally parallel to the plane of the first planar side and extending from the inner edge of the second planar side to form the inverted U-shape. Nowhere in Bowsky et al. is it taught or suggested that the wall shields 14 disclosed therein take the form of an inverted U-shape having the elements called for in claim 9, nor is there any suggestion or motivation provided to modify wall shields 14 to have an inverted U-shape. The mere disclosure in Bowsky et al. that “the shape and number of wall shields can be varied,” *Bowsky et al.*, Col. 4, ln. 25, is not enough to support the Examiner’s assertion that it would have been obvious to one of ordinary skill in the art to modify the shield in Bowsky et al. to achieve the inverted U-shaped electrical shield called for in claim 9. In fact, such a modification to the wall shields 14 in Bowsky et al. would be detrimental to the level of electrical shielding provided by wall shields 14 between conductor pins 7. That is, an inverted U-shaped shield positioned about the top conductor pin, for example, would provide less shielding between the top conductor pin and the lower two conductor pins as compared to a circular shield that completely surrounds the top conductor pin. *See Bowsky et al.*, Col. 4, lns. 12-24; *see also* Figs. 1 and 2. As such, there is no reason why one skilled in the art would make the modification to wall shields 14 set forth by the Examiner.

As the elements of the inverted U-shaped shield called for in claim 9 are wholly absent from Bowsky et al. and are only taught in the present application, Applicant believes that the Examiner’s modification of the cited reference to achieve the current invention is based on improper hindsight reasoning. Regarding such modification of a prior art reference (or combination of references), the court in *KSR Int’l Co. v. Teleflex Inc.* warned that “[a] factfinder should be aware, of course, of the distortion caused by

hindsight bias and must be cautious of arguments reliant upon ex post reasoning.” *See KSR Int’l Co. v. Teleflex Inc.*, No. 04-1350 slip op. at 17 (U.S. April 30, 2007). Here, the Examiner uses both improper hindsight and the teaching of the present invention to assert that it would have been obvious to one skilled in the art to modify the shields in Bowsky et al. to achieve the current invention. Such motivation is improper, as “there must be some reason for the [modification] other than the hindsight gained from the invention itself...” *Uniroyal Inc. v. Rudkin-Wiley Corp.*, 837 F.2d 1044, 5 U.S.P.Q.2d 1434 (Fed. Cir. 1988). The elements of the inverted U-shaped shield called for in claim 9 are wholly absent from Bowsky et al. and are only taught in the present application. Without the teachings of the present application, the Examiner has provided no reasoning as to why it would have been obvious to one of ordinary skill in the art to modify the shape of the shield in Bowsky et al. to achieve the inverted U-shaped electrical shield called for in claim 9. As Bowsky et al. fails to teach or suggest that which is called for in claim 9, and as the Examiner has provided no support for the so-called “obvious” modifications that are necessary for the shield of Bowsky et al. to achieve that which is called for in claim 9, Applicant believes that claim 9, and the claims dependent therefrom, are patentably distinct over the cited reference.

Claim 11

The Examiner failed to set forth arguments as to where Bowsky et al. teaches or suggests the elements called for in claim 11. Claim 11 calls for the shield of claim 9 to be formed of a biaxially-oriented thermoplastic film having a thickness of about 10-15 thousandths of an inch. The Examiner has provided no indication of where Bowsky et al. discloses such a construction or why it would have been obvious for one of skill in the art to use a biaxially-oriented thermoplastic film having a thickness of about 10-15 thousandths of an inch in forming the electrical shield of the present invention. In fact, the Examiner appears to have completely ignored the elements called for in claim 11. As such, Appellant believes that claim 11 is patentably distinct over the cited reference.

Claim 38

The Examiner failed to set forth arguments as to where Bowsky et al. teaches or suggests the elements called for in claim 38. Claim 38 calls for the first planar side, the

second planar side, and the third planar side of the shield to be affixed to an internal surface of a welding apparatus housing. The Examiner has provided no indication of where Bowsky et al. discloses such affixation of the cylindrical wall shields 14 to a welding apparatus housing. In fact, Bowsky et al. fails to teach or suggest that cylindrical wall shields 14 are attached to a housing, but instead discloses that cylindrical wall shields 14 form part of plastic block 8. *Bowsky et al.*, Col. 4, lns. 12-24. As shown in Fig. 1, plastic block 8 is clearly not affixed to wall 4 of pressure chamber 6 but is a freely movable component. As the Examiner appears to have completely ignored the elements called for in claim 38, and as Bowsky et al. clearly does not teach or suggest the elements called for therein, Appellant believes that claim 38 is patentably distinct over the cited reference.

Claim 39

The Examiner failed to set forth arguments as to where Bowsky et al. teaches or suggests the elements called for in claim 39. Claim 39 calls for at least one of the first planar side, the second planar side, and the third planar side of the electrical shield to be interfitted with a plurality of ribs on the internal surface of the housing to secure it thereto. Again, the Examiner has provided no indication of where Bowsky et al. discloses such securing of the cylindrical wall shields 14 to a welding apparatus housing. Rather, as set forth above with respect to claim 38, Bowsky et al. fails to teach or suggest that cylindrical wall shields 14 are attached to a housing, but instead discloses that cylindrical wall shields 14 form part of a freely movable plastic block 8. *Bowsky et al.*, Col. 4, lns. 12-24; *see also* Fig. 1. As the Examiner appears to have completely ignored the elements called for in claim 39, and as Bowsky et al. clearly does not teach or suggest the elements called for therein, Appellant believes that claim 39 is patentably distinct over the cited reference.

Claims 40-43

Claims 40-43 further call for positioning of the first, second, and third planar sides of the electrical shield with respect to the electrical stud. As set forth above in regards to claim 9, such limitations are also wholly absent from Bowsky et al. As such, Appellant believes that claims 40-43 are patentably distinct over the cited reference.

8. **CONCLUSION**

In view of the above remarks, Appellant respectfully submits that the Examiner has provided no supportable position or evidence that claims 9-11 and 38-43 are not patentable. As argued above, (1) Bowsky et al. fails to teach or suggest each and every element as called for in the present claims, and (2) the Examiner has provided no reasoning as to why it would have been obvious to one of ordinary skill in the art to modify Bowsky et al. to achieve the present invention, but rather, the Examiner's modification of the cited reference to achieve the current invention is based on improper hindsight reasoning. Accordingly, Appellant believes claims 9-11 and 38-43 are patentably distinct thereover. Accordingly, Appellant respectfully requests that the Board find claims 9-11 and 38-43 patentable over the prior art of record, direct withdrawal of all outstanding rejections and direct the present application be passed to issuance.

Respectfully submitted,

/Timothy J. Ziolkowski/

¹Timothy J. Ziolkowski
Registration No. 38,368
Phone 262-268-8181
tjz@zpspatents.com

Respectfully submitted,

/Kevin R. Rosin/

Kevin R. Rosin
Registration No. 55,584
Phone 262-268-8100 ext. 15
krr@zpspatents.com

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Attorney Docket No.: ITW7510.090

P.O. ADDRESS:

Ziolkowski Patent Solutions Group, SC
136 South Wisconsin Street
Port Washington, WI 53074
262-268-8100

¹The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 50-2623. Should no proper payment be enclosed herewith, as by credit card authorization being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 50-2623. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extensions under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 50-2623. Please consider this a general authorization to charge any fee that is due in this case, if not otherwise timely paid, to Deposit Account No. 50-2623.

CLAIMS APPENDIX

1-8 (Canceled)

9. (Previously Presented) A shield for preventing arcing from an electrical stud of a portable welding apparatus, the shield comprising a generally inverted U-shaped configuration adapted to at least partially surround the electrical stud, the shield constructed of a non-conductive material, the inverted U-shaped shield having a first planar side having an upper edge, a second planar side extending inwardly from the upper edge of the first planar side and having an inner edge, the second planar side oriented in a plane generally perpendicular to the plane of the first planar side, a third planar side extending from the inner edge of the second planar side, the third planar side oriented in a plane generally parallel to the plane of the first planar side to form the inverted U-shape.

10. (Previously Presented) The shield of claim 9 wherein the non-conductive material is a plastic material and is preformed into the inverted U-shaped configuration.

11. (Previously Presented) The shield of claim 9 wherein the plastic material is a biaxially-oriented thermoplastic film and has a thickness of about 10-15 thousandths of an inch.

12-37 (Canceled)

38. (Previously Presented) The shield of claim 9 wherein the first planar side, the second planar side, and the third planar side are affixed to an internal surface of a welding apparatus housing.

39. (Previously Presented) The shield of claim 38 wherein at least one of the first planar side, the second planar side, and the third planar side are interfitted with a plurality of ribs on the internal surface of the housing to secure it thereto.

40. (Previously Presented) The shield of claim 38 wherein the first planar side is positioned intermediate an electrical stud and the welding apparatus housing.

41. (Previously Presented) The shield of claim 40 wherein the second planar side is positioned horizontally and above the electrical stud.

42. (Previously Presented) The shield of claim 40 wherein a lower edge of the third planar side is located below the electrical stud.

43. (Previously Presented) The shield of claim 42 further comprising a lower planar side oriented in a plane generally perpendicular to the third planar side and connected to the lower edge of the third planar side, the lower planar side extending inwardly toward an internal space of the welding apparatus housing.

EVIDENCE APPENDIX:

-- None --

RELATED PROCEEDINGS APPENDIX:

-- None --